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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,411	07/03/2001	Fabrice Poppe	Q64941	9811

7590 10/05/2005  
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3213

EXAMINER

ADHAMI, MOHAMMAD SAJID

ART UNIT PAPER NUMBER

2662

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/897,411	<b>Applicant(s)</b> POPPE ET AL.	
	<b>Examiner</b> Mohammad S. Adhami	<b>Art Unit</b> 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/3/01</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. Claim 2 recites the limitation "said de-jittering buffer (BUF)" in claim 2 line 19. There is insufficient antecedent basis for this limitation in the claim.
3. Regarding claim 3, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
4. In claim 4 in the phrase "adapting said plurality of parameters also during", there is no previous basis for "also". The parameters were not previously adapted in claim 1.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1,2,4,6-8, and 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Jorgensen (US 6,628,629).

Re claim 1 and 12-15:

Jorgensen discloses a method and a device "to set up a voice over Internet Protocol communication between a mobile terminal (MT) and a second device (T2), said voice over Internet Protocol communication comprises an air interface between said mobile terminal (MT) and a base station (BS), being coupled via an access network and an Internet Protocol Network to said second device (T2)" (Figure 2A where reference 204 can be a MT, reference 202 can be a BS, reference 102a can be a T2 and the network shown can be an access network (MS and BS communicate with each other, allowing the MS access, i.e. an "access network" and the device is the network comprised of the "MT", "BS", and "T2") and Internet Protocol network (Col. 34 line 40 "In an example embodiment, data network...can be an IP packet-switched network")) comprising "a step of determining, according to predefined rules and conditions, during call setup appropriate values for a plurality of parameters which are characterizing said voice over Internet Protocol communication (Col. 4 lines 5-9 "resource allocation means optimizing end-user quality of service (QoS) and allocating shared bandwidth among the subscriber CPE stations, wherein there is applied an advanced reservation algorithm to an Internet Protocol (IP)" and Col.3 lines 60-61 "The advanced reservation algorithm makes a determination whether the IP flow is jitter-sensitive" where the jitter is a parameter that is used to

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characterize the voice over IP communication) in order to realize a desired trade-off between a predefined user quality...and a predefined bandwidth efficiency" (Col. 3 lines 22-24 "acceptable QoS characteristics, while at the same time delivering bandwidth sufficient to quality as broadband").

Re claim 2:

Jorgensen discloses signaling at least part of said appropriate values to anyone of said mobile terminal (MT), said second device (T2), said e-jittering buffer (BUF) and said base station (BS)" (Col. 44 lines 58-62 "(RTCP) is a companion protocol to RTP that analyzes network conditions. RTCP operates in a multi-case fashion to provide feedback to RTP data sources as well as all session participants" where the session participants can be the MT, BS, BUF, and/or T2).

Re claim 4:

Jorgensen discloses "adapting said plurality of parameters...during said voice over Internet Protocol communication" (Col. 15 lines 15-18 "a QoS mechanism that can dynamically optimize system behavior to each particular IP flow, and can also adapt to changes with changing network load, congestion, and error rates.")

Re claim 6 and 7:

Jorgensen discloses "implementing said second device (T2) by a voice over Internet Protocol gateway" and "by an Internet Protocol terminal" (Col. 38

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lines 37-40 "The H.323 architecture defines four major components for network-based communications, including terminal, gateways").

Re claim 8:

Jorgensen discloses having "predefined user preferences...to set up said voice over Internet Protocol communication" (Col. 13 lines 45-48 "the demands of the users...modify how the QoS mechanism is operating at any given instant").

Re claim 16:

Jorgensen discloses a "telecommunication network comprising a device" as discussed above (Col. 3-4 lines 61-67, 1-2 "the telecommunication system including a wireless base station coupled to a first data network, one or more host workstations coupled to the first data network, one or more subscriber customer premise equipment (CPE) stations in wireless communication with the wireless base station").

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen in view of Tsui (US 6,678,730) and further in view of Gerszberg (US 6,714,534).

As discussed above, Jorgensen meets all the limitations of the parent claims. Jorgensen also discloses a parameter for characterization being jitter (Col. 3 lines 60-61 "The advanced reservation algorithm makes a determination whether the IP flow is jitter-sensitive") or payload size (Col. 35 lines 4-5 "Bandwidth capacity is segmented into 53-byte cells, having a head and payload fields" where if the bandwidth capacity is changed, the payload size may change).

Jorgensen does not explicitly disclose the parameters of "power budget" or "channel code".

Tsui discloses "a "channel code" (Col. 5 lines 39-40 "Many links do not employ channel coding to improve performance"), and a "power budget" (Col. 12 lines 31-32 "Each modulation scheme has an associated BER vs. SNR", where SNR is the "power budget").

Jorgensen and Tsui are analogous because they both pertain to communications and quality of service.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jorgensen to include the above discussed limitations as taught by Tsui in order to provide "testing of digital communication test systems" (Tsui Col. 1 line 57).

Neither Jorgenson nor Tsui explicitly disclose an interleaving scheme as a parameter.

Gerszberg discloses using an interleaving scheme as a parameter (Col. 15 lines 51-53 "It may be desirable to tailor the interleaving interval to the latency budget for voice applications in DSL modems utilized to carry voice" where it is shown that the interleaving scheme has a role in latency ("mouth to ear delay")).

Jorgensen in view of Tsui are analogous to Gerszberg because they all pertain to communications and quality of service.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jorgensen in view of Tsui to include the limitations discussed above as taught by Gerszberg in order "to correct errors due to impulsive noise" (Gerszberg Col. 15 lines 47-48).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen in view of Boariu (US 6,865,237).

As discussed above, Jorgensen meets all the limitations of the parent claim.

Jorgensen does not explicitly disclose using an "air interface [that] is a Universal Mobile Telecommunications System air interface".

Boariu discloses using an "air interface [that] is a Universal Mobile Telecommunications System air interface" (Col. 11 lines 27-29 "The main parts of the mobile communication system are core network, CN, UMTS terrestrial radio access network UTRAN").

Jorgensen and Boariu are analogous because they both pertain to network communications.



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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jorgensen to use an interface that is UMTS as taught by Boariu in order to offer services compatible to mobile users of different mobile system protocols.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgenson in view of Kwan (US 6,504,838).

As discussed above, Jorgensen meets all the limitations of the parent claims.

Jorgensen does not explicitly disclose, "Defining said-trade-off according to predefined operator preferences of an operator exploiting said base station (BS)".

Kwan discloses, "defining said trade-off according to predefined operator preferences of an operator exploiting said base station (BS)" (Col. 24 lines 24-27 "the VAD, in either the encoder system or the decoder system, can be configured to operate in multiple modes so as to provide system tradeoffs between voice quality and bandwidth requirements.").

Jorgensen and Kwan are analogous because they both pertain to communications systems and quality of service.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jorgensen to define the trade-off between quality and bandwidth according to predefined operator preferences as taught by Kwan in

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order to optimize minimal "system resource requirements" (Kwan Col. 49 lines 25-26).

11. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen in view of Lo (US 6,798,786) and further in view of Tsui and Gerszberg.

Re claims 10 and 11:

Jorgensen meets all the limitations of the parent claim.

Jorgensen does not explicitly disclose "determining in each plane of said plurality of mouth to ear versus distortion planes a numerical model comprising constant-rating curves, each one of said constant rating curves reflecting a user quality of said voice over Internet Protocol communication; determining working points, each mouth to ear delay versus distortion place, said mouth to ear delay being determined in function of detailed information about the characteristics of the different transport stages a packet of said voice over Internet Protocol communication goes through, said distortion being determined in function of different packet loss probabilities; and providing thereby a total set of working points; and determining according to said desired trade-off working point our of said total set of working points, said optimal working point being located in a region of one of said mouth to ear delay versus distortion planes, that is bounded by a constant rating curve that reflects said predefined user quality and said optimal working point being associated according to said step c) to a predefined maximum number of voice words"

Lo discloses "determining in each plane of said plurality of mouth to ear versus distortion planes a numerical model comprising constant-rating curves, each one of said constant rating curves reflecting a user quality of said voice over Internet Protocol communication" (Figure 7A and 7B where the "mouth to ear delay" is shown on the x-axis and the distortion is shown on the y-axis and Col. 12 lines 45-46 the "R value represents the desired quality of service", which is ), "determining working points, each mouth to ear delay versus distortion place...said mouth to ear delay being determined in function of detailed information about the characteristics of the different transport stages a packet of said voice over Internet Protocol communication goes through, said distortion being determined in function of different packet loss probabilities; and providing thereby a total set of working points" (Fig. 7B where the curve is comprised on many "working points" and Col. 12 lines 43-45 "Each E-model includes a chart mapping packet delays and percentage of packet loss" where the mouth to ear delay is accounted for on the x-axis of Fig. 7B and the packet loss probability is accounted for on the y-axis of Fig 7B), "and determining according to said desired trade-off working point our of said total set of working points, said optimal working point being located in a region of one of said mouth to ear delay versus distortion planes, that is bounded by a constant rating curve that reflects said predefined user quality and said optimal working point being associated according to said step c) to a predefined maximum number of voice words" (Col.13 lines 11-14 "Thus, given the current packet delay and percentage of

packet loss, the charts of the E-models for the various codecs may be accessed to determine which codec can support the desired R value”).

Jorgensen and Lo are analogous because they both pertain to communications and quality of service.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jorgensen to include the above listed limitations as taught by Lo in order to “[manage] calls over a data network” (Lo. Col. 1 lines 62-63) to better compensate for delay and distortion.

Neither Jorgenson nor Lo explicitly disclose associating the said planes with a “channel code” and using a number of voice words to determine a working point and a place being associated with a “power budget”.

Tsui discloses the planes discussed above being associated with “a “channel code” (Col. 5 lines 39-40 “Many links do not employ channel coding to improve performance”), using a number of voice words to determine a working point and a plane being associated with a “power budget” (Col. 12 lines 31-32 “Each modulation scheme has an associated BER vs. SNR”, where relationship between BER and SNR is shown and SNR (or “power budget”) is related to the distortion, one of the factors in the working point).

Jorgensen in view of Lo and Tsui are analogous because they all pertain to communications and quality of service.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jorgensen in view of Lo to include the above discussed

limitations as taught by Tsui in order to provide "testing of digital communication test systems" (Tsui Col. 1 line 57).

Neither Jorgenson, Lo, nor Tsui explicitly disclose using an interleaving scheme to determine a working point.

Gerszberg discloses using interleaving scheme to determine a working point (Col. 15 lines 51-53 "It may be desirable to tailor the interleaving interval to the latency budget for voice applications in DSL modems utilized to carry voice" where it is shown that the interleaving scheme has a role in latency ("mouth to ear delay"), which is one of the factors of the working point).

Jorgensen in view of Lo and further in view of Tsui are analogous to Gerszberg because they all pertain to communications and quality of service.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jorgensen in view of Lo and further in view of Tsui to include the limitations discussed above as taught by Gerszberg in order "to correct errors due to impulsive noise" (Gerszberg Col. 15 lines 47-48).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kamani (EP 0 966 273) shows monitoring QoS parameters and calculating delay versus packet loss percentage. Shaffer (US 5,898,668) shows monitoring the QoS and adaptively changing the parameters. Kung (US 6,775,267) shows transmitting the QoS information between various components of the network.

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Brent (US 6,788,651) shows using interleaving for determining part of the working point.

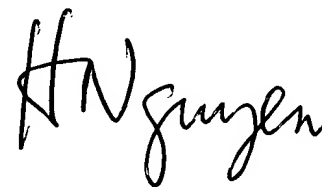
McClaghry (US 5,579,339) shows using an interleaving scheme with bandwidth considerations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad S. Adhami whose telephone number is (571)272-8615. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MSA 9/22/2005

A handwritten signature in black ink, appearing to read 'HNguyen'.

**HANH NGUYEN  
PRIMARY EXAMINER**